

Notice of Allowability

Application No.

09/965,400

Examiner

Matthew J. Sked

Applicant(s)

ADUT, VICTOR

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/19/05.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 27 September 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152). |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Amendment

1. The objection to the specification is withdrawn in view of the amendments filed 5/19/05.
2. Applicant's arguments, see page 9, filed 5/19/05, with respect to claims 1, 12 and 15 have been fully considered and are persuasive. The rejection of claims 1-21 has been withdrawn.

Allowable Subject Matter

3. Claims 1-21 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: Claims 1, 12 and 15 recite the combination of a speech coding method, using perceptual weighting, that determines at least one pitch value from a speech signal, characterizes the voicing of the speech signal, trains a Lloyd-Max quantizer only with the pitch values of those speech signals that are characterized as being fully voiced, and finally quantizing the pitch values of speech signals that are both fully voiced and partially voiced.
5. Rothweiler teaches a method of coding speech comprising the steps of:
sampling a speech signal (A/D converter, Fig. 1, element 14);
determining a pitch of the speech signal (pitch epoch detector, col. 8, lines 11-13);

characterizing the voiced quality of the speech signal (determination of the signal being voiced or unvoiced, col. 9, lines 62-67 and col. 10, lines 8-12);

implied training a Lloyd-Max quantizer (col. 13, lines 30-32); and

quantizing the pitch values (pitch quantized by differential quantizer, col. 17, lines 37-47) from the training step and the pitch values of those speech signals from the determining step not characterized as being substantially fully voiced in the characterizing step (determines the pitch for all voice segments hence the averaging would take into account all voiced and unvoiced segments, col. 10, lines 23-36).

6. Nishiguchi teaches a speech coder that performs a voicing decision, pitch calculation and uses perceptual weighting.

7. None of the prior art on record teaches training a Lloyd-Max quantizer using only the pitch information from substantially fully voiced speech signals and using this quantizer to quantize speech signals characterized both as being both fully voiced and partially voiced. It would not have been obvious to one of ordinary skill in the art at the time of invention to modify the art on record to arrive at the applicant's invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Sked whose telephone number is (571) 272-7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MS
07/26/05


SUSAN MCFADDEN
PRIMARY EXAMINER